

Salinger (J. L.)

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IN
FACIAL ERYSIPELAS,
WITH A REPORT OF CASES.

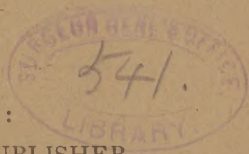
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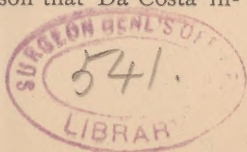
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The Use of Pilocarpine Hypodermically in Facial Erysipelas, with a Report of Cases.

NO disease in recent times has undergone so many ineffectual changes in treatment as has erysipelas. It was hoped that, with the introduction of some of the modern drugs, such as antiseptics, antipyretics, etc., some agent would be found which would successfully combat the disease. Up to the present time the orthodox treatment by iron and its preparations, especially the *tincture* of the *chloride*, has been much in vogue. It can, however, scarcely be claimed that this treatment shortens the course of the disease, as uncomplicated erysipelas is a self-limited malady, which usually lasts from eight to ten days. A remedy, to be operative in a self-limited disease, must either shorten or powerfully influence its principal symptoms. Through the study of the pathology of erysipelas, especially the significance of its causative germ, and the knowledge of its distribution in the economy and the relation that the germ bears to the skin and the general lymphatic system, remedies should be used that have a local or specific action on these structures. It was for this reason that Da Costa in-



roduced the treatment of erysipelas by pilocarpine hypodermically.

Pilocarpine, according to Brunton, stimulates the secreting nerves. In this way an enormous secretion of saliva from the salivary glands is caused. Large secretions of sweat, from its action on the sweat glands, are produced, beginning either in the face or at the point of subcutaneous injection, and thence extending over the whole body. The large amount of sweating produced causes a fall in the temperature, the secretion of sweat usually lasting two or three hours, and is often so copious that the body loses from one to two pounds in weight. Pilocarpine is *excreted* in the urine unchanged by the kidney (Brunton).

It is not the object of this article to call attention to the symptomatology or pathology of erysipelas, but merely to give the result of a number of cases treated exclusively by the hypodermic use of pilocarpine. The cases were not selected, but treated in a series, both in hospital and private practice, numbering, in all, twenty-eight. Of this number, twenty were males and eight females, the ages ranging from twenty-two to seventy-six.

CASE I.—T. G., aged thirty-eight, black, laborer by occupation, was admitted to Philadelphia Hospital on June 6, 1893. Patient was well nourished and of medium stature. Casual examination showed the face to be swollen and cedematous, the eyelids being almost entirely closed. As the swelling extended upward over the head on both sides, it gradually lessened, but even at the base of the skull there was a boggy sensation on pressure. The swelling

also gradually decreased as it extended downward over the face to the neck. Blebs were noticeable on the cheeks and forehead, and some of the cervical glands were enlarged. The margin of the eruption was raised and well defined; the nose distorted and the ears shapeless; the skin was hot to the touch. Physical examination showed the heart and lungs normal. The patient appeared dull and stupid, answering questions hesitatingly, seeming not to comprehend them. His wife said that two days before having been brought to the hospital he became engaged in a street-brawl, while under the influence of liquor. In the fight he received an injury above his right eye, which appeared to heal rapidly, but which later proved to be the starting-point of the erysipelas. On admission to the hospital, he soon became delirious; his temperature taken in the axilla was 104° F.; his pulse, 108, feeble, and thready; his respiration, 24. His face was dusted with bismuth subnitrate and a mask applied. He was given a hypodermic of $\frac{1}{6}$ grain of pilocarpine. In three hours, noticing that no sweating had taken place, the hypodermic was repeated. The temperature fell slightly during the night; towards morning it again rose, and the patient became very delirious, attempting to get out of bed, and making considerable noise, etc. An examination of the urine showed specific gravity 1015; albumin was present, both by the ring and heat test, in appreciable amount; casts were not found. The hypodermics were given every four hours. After the third injection a small amount of sweating was noted. The delirium increased, and it was necessary to strap him down on the

bed. On the evening of the next day the temperature dropped to 101° F. He fell asleep, and was much quieter during the night, although still slightly delirious; in fact, delirium was present for the next two days to a greater or less extent. During this time the sweating was most copious. On the fourth day a pseudo-crisis occurred. The eruption, which had been gradually improving, had nearly disappeared. On the night of the same day a fresh invasion of the disease above the right eyebrow sent the temperature up again. The hypodermics were again used; but two were given, and towards morning the temperature was again normal. He remained in the hospital a week longer, during which time the temperature remained normal. On the sixth day the inflammation of the skin over the face and scalp, which was most extensive, had entirely disappeared. Desquamation was quite marked over the inflammatory area. The albumin had entirely disappeared from the urine. This was the only treatment, with the exception of six ounces of whiskey, given in the course of twenty-four hours, in divided doses.

This, undoubtedly, was an exceptionally severe case, the temperature being higher, the delirium more marked, the eruption more extensive than in average cases. The quantity of albumin present was a guide by which to judge of the severity of the case, for although traces of albumin are present in ordinary cases, large amounts always signify extensive disease. The writer has reported a case (*Medical News*, July, 1891, "Renal Disease and Uræmia attending Acute Facial Erysipelas") in which lasting renal disease was the result of facial erysipelas.

Notwithstanding the severity of the symptoms in the above-quoted case, the disease lasted only six days, and the almost immediate amelioration of the symptoms was unquestionably due to the administration of hypodermics of pilocarpine.

Case II. shows a somewhat rarer form of erysipelas, and one which, under ordinary circumstances, is not so easily influenced by treatment.

CASE II.—S. S., white, laborer, native of Russia. A history could be obtained only with great difficulty, as the patient spoke Russian. On admission to the hospital his temperature was 103° F., his pulse 88, his respirations 36. He was a powerfully-built man, of fair complexion. When first seen, his face had a dusky, red hue, but there was no evidence of any present inflammation. Attached to his ears were pieces of dried, loose skin, as though they were remains of blisters. A circumscribed area of redness was visible in the left pectoral region, extending through the axillary space to the back. The dull color of the neck and shoulders and the particles of dry skin gave evidence of previous inflammation. Passing downward, the skin was seen to assume a much brighter hue, and was extremely hot to the touch. A distinctly marginate appearance, slightly elevated, was apparent. The posterior surface of both arms was affected, this process extending towards the flexor surface and almost completely encircling the arm. Posteriorly, the process extended almost to the lumbar region; the familiar picture of erysipelas migrans was easily demonstrable. Physical examination gave no evidence of dis-

ease. He frequently brought the hand to the forehead, showing that he suffered greatly from headache.

He was given a hypodermic of $\frac{1}{6}$ grain of pilocarpine. After the first hypodermic the temperature fell during the night, till at eight o'clock the next morning it was 97.3° F. The man had perspired very profusely. Later in the day the temperature rose to 99° F., but he seemed very comfortable. He had applied a paste of bismuth subnitrate and water to the inflamed area, which appeared to exercise a very beneficial influence. At first the man suffered from retention of urine, voiding none at all the first day, until after the use of the hypodermic, when a small quantity was passed. The urine contained traces of albumin; no casts. The next day he voided only eight ounces; by catheter twenty-seven ounces more were obtained. On the third day the quantity of urine was normal. The hypodermics of pilocarpine were given every four hours, there being usually a fall of from $1\frac{1}{2}^{\circ}$ to $2\frac{1}{2}^{\circ}$ F. after its administration.

The process extended almost over the entire anterior surface of the chest and over the arms to the elbows. The erysipelatous process improved at once after the administration of the hypodermics, and by the fourth day nothing could be seen except blebs and dry skin where the process had been. In this case there was no delirium, and, with the exception of headache, the patient seemed fairly comfortable. Indeed, the headache remained as a troublesome symptom for nearly one week after all traces of the inflammation had disappeared.

From the appearance of the face, ears, and

neck of the patient it could be fairly assumed that the disease must have begun as one of facial erysipelas, and must have existed for at least a number of days before the patient's admission to the hospital. No trace of a wound or injury could be found.

The histories narrated above are each a type of severe erysipelas encountered mostly in hospital practice. In Case I. most likely the alcoholic history was in large part responsible for the amount of delirium present, for it is well known that when drunkards are attacked with acute diseases, delirium is always a prominent symptom.

In all the cases treated by this method (twenty-eight), the disease was comparatively severe. In none did the treatment last longer than eight days, and quite a number recovered in four days. Albuminuria, to a greater or less extent, was present in twenty-six cases, and lasted throughout the course of the disease. In the severest cases quite appreciable amounts could be obtained by the cold test with nitric acid. In none of the cases were tube-casts present. Four of the patients suffered from retention of urine.

The good results obtained by pilocarpine must be ascribed to its action on the skin and subcutaneous tissues. Perhaps the sweating induced by its administration opens a passage for the expulsion of the bacilli which are responsible for this disease. Certain it is that larger quantities of urine are passed and retention rapidly relieved by pilocarpine. The advantage of administering pilocarpine hypodermically is to be found in its rapid action. In order to obtain the best results, the full physiological

action of pilocarpine must be produced ; that is to say, that unless marked sweating, increased salivation, and increased diuresis are noticed, good results will be looked for in vain.

The only contraindications to its use would seem to be in cases of actual organic disease of the heart. Where cardiac disease is present, pilocarpine may have entirely too depressing an effect upon the circulation, nor would it be a safe remedy for old, enfeebled, and cachectic persons. When erysipelas occurs as a complication in another disease, pilocarpine has not shown itself to be effectual. It seems that, where erysipelas occurs as a secondary disease, the process is more severe. Hence so-called idiopathic erysipelas is the only form of the disease in which pilocarpine may be safely and advantageously administered.

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